

REMARKS

Applicants' attorney acknowledges with thanks the interview of November 7, 2005, kindly accorded the attorney by Examiner Patterson.

In the course of the interview, the Applicants' Attorney explained that the intent of claim 1 is to cover a nonwoven wet-packed, wet wipe product that is in the microcreped state, the web having resultant creped thermoplastic fibers. The creped fibers and the ridges and grooves in the web as a whole are permanent deformations as the result of heat applied during the microcrepe treatment. Their combined effect is found to produce the enhanced liquid retentive and wiping effects described in the specification. Claim 23 is directed to a package of multiple sheet units of such construction.

Claim 2 is directed to a wet wipe product comprising a web that is also in microcreped state with permanent crepe in the constituent thermoplastic fibers, providing a volume enhanced condition, the permanent crepe capable of preserving this volume-enhanced condition in the presence of a web agent. Claim 24 is directed to a package of multiple sheets of such construction.

The nature of microcreping action in producing such "dry-creped" structure was discussed at the interview. As is known, a microcreped web is produced by pressing the web against a driven roll so that the grip of the moving roll, not adhesion to the roll surface, drives the web against a retarded pile of the treated material. In this connection, Applicants' attorney referred Figs. 5-5C and the description of Figs. 8-13 of the specification.

Figs. 5-5C show products with microcreped constituent thermoplastic fibers. The creping (or crinkling) of constituent fibers occurs in the confinement of zone B of the microcreping cavity, Figs. 10,12 and 13. When ridges and grooves in the web as a whole are formed, this occurs in the downstream enlarging region as a result of columnar collapse of the web, with further attendant deformation of the thermoplastic constituents.

For further description see the text of the patents cited on pages 14 and 15, incorporated by reference on page 16 of the specification, for instance U.S. 3,260,778. Photomicrographs Figs. 18-18b of U.S. 3,810,280 for instance illustrate, at greater magnification, crinkled constituent fibers combined with ridges and grooves as a result of the material being in a microcreped state. While these particular magnified views are of a knit pattern, similar effects are producible with nonwovens, as described the referenced patents.

Regarding the principal reference, Wang et al, it was explained at the interview that a microcreped structure is clearly not the same as a web structure obtained by repeated scraping of an adhered web from the surface of a dryer drum, e.g. a Yankee dryer, such as employed in, Wang, et al. The action and physical result of Wang et al is different due to its intimate adhesion of the web constituents to the drum surface at the time of creping. (See also "proper adhesion", column 2 line 29 of U.S. 4,894,118, cited as the example by Wang et al at column 7 line 14.) Also, though a microcreped web typically has structural alterations throughout the web thickness, an earmark of creping a web adhered to a dryer drum is that the effect is one sided and typically multiple recreping passes are employed, resulting in characteristic structure different from a microcreped web. Note for instance Wang et al requires a "recreped" web.

The basis in the specification for the web being in a "microcreped" condition and the use of the term interchangeably with "dry creped" was also discussed with the Examiner. Applicant's attorney referred the Examiner to Figures 11 through 13 of the present application and the specification, page 9: "Fig. 11 illustrates shortening of the web as it passes through the drycreper, Fig. 12 is a cross-section view of a microcreping cavity of a bladed microcreper while Fig. 13 is a diagram of the conformation of the dry-creping cavity through which the material is passed." See also the description of examples, appearing on page 17 of the specification, in particular the paragraph beginning line 16: "Running lengths of each of these materials were subjected to microcreping using a commercial bladed microcreper, available from Micrex Corporation, Walpole, Massachusetts, having a mechanical set up substantially as shown in Fig. 12. Active heating was provided...." Each of the creper patents cited on pages 14 and 15 and

incorporated by reference on page 16, is characterized by the web being in a condition produced by the web having been pressed against a driven roll so that the grip of the moving roll, not adhesion to a roll surface, drives the web against a retarded pile of the treated material. The resultant webs are intended to be comprehended by the term "microcreped" as used herein.

In the course of the interview, replacement of the term "dry creped" in the claims with the term "microcreped" was discussed. It was agreed that "microcreped", being a term used in the field, could better define the state of the web in distinguishing the web of the principal reference Wang et al. This change has been made to the claims in the present amendment and a corresponding clarifying amendment has been made to the specification.

Also in the course of the interview, Applicants' attorney noted that the term "heat set" as used in this segment of industry, merely refers to the result of heating of thermoplastic fibers sufficiently during microcreping that the deformation is permanent when the web returns to ambient temperature. "Heat set" is not intended to require a chemical reaction such as cross-linking. Applicants' attorney herewith changes the claims to refer to the permanency of the deformation, to avoid possible confusion of those unfamiliar with this usage of "heat set".

The quantity of thermoplastic fibers in the preferred embodiments of the specification was also discussed with the Examiner. Applicant drew attention to the description of the embodiment of Fig. 1, page 10: "The percentage by weight of absorbent or adsorbent fibers 8 of preform 11 is between about 1/3 and 2/3 while the percentage by weight of thermoplastic fibers is about within this same range". Dependent claim 8 is to this effect. It was pointed out that this range is outside the Wang et al range for synthetic fibers. Wang et al disclose an upper limit of 30%, with preferred range of 0 to 5%.

The possibility of including a 1/3 by weight minimum of thermoplastic fibers in claim 1 was discussed with the examiner. On further consideration, applicants prefer to continue to present this important range in dependent claim 8, because, as also indicated in the specification, operable embodiments are possible with percentage thermoplastic fibers below that limit, and

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limitation to the microcreped condition of the web is submitted to be a clear and sufficient distinction over Wang, et al.

For the above reasons, all claims, as now amended are, submitted to be patentable over the references of record and early favorable action is solicited.

Please apply any charges or credits to deposit account 06-1050, referencing attorney docket number 02703-023001.

Respectfully submitted,

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